

Frequently Asked Questions DRAFT 12/12/03

1. What is the Mars Museum Visualization Alliance?

The alliance is a partnership between NASA's robotic Mars Exploration Program and museums, science centers, and planetaria across the country to bring the adventure of exploring Mars to students, educators, and the public. It is intended to bring real-time data and Current Science and Technology to museum visitors through visualizations and professional development.

2. How will people be able to share the adventures of the Mars rovers?

Through seeing the images from Mars at the same time as the scientists see them: people will be able to predict where the rovers will be directed, what they will examine, and what they will find. The images will be made available via NASA TV and over the Internet on a free subscription basis to registered users.

3. Why the internet? Why not NASA TV?

NASA TV will remain the primary best source for the landing commentary, interviews, videos, and press conferences, especially at the time of the landings. However, at times, NASA TV may be needed by other elements of NASA and may not carry the live images throughout the 90-day missions. NASA TV's website at <http://www.nasa.gov/multimedia/nasatv/index.html> gives the daily schedule and other web sources of NASA TV.

The internet is a cheap, efficient path to deliver images to classrooms, auditoriums, or kiosks.

4. Why must users register?

When Mars Pathfinder and the Sojourner Rover landed on Mars in 1997, the internet traffic was the largest for any single event up to that time. We expect the internet traffic for the landings and operation of the twin Mars Exploration Rovers to be much larger than that. The primary goal of the Mars Viz Alliance is to be sure that museums, science centers, and planetaria have unimpeded access to the images from the rovers, so that they may share them with their audiences. To this end, we are setting up dedicated servers that only registered users may access, to keep the traffic on these servers manageable. Registered users will have access to technical support, e-mail notifications of upcoming mission and press events, professional development opportunities, and the opportunity to advertise their organization's Mars events on the public NASA Mars website.

4. How do we register?

Fill out the signup form at <http://marsdata1.jpl.nasa.gov/alliance>. You will be asked for the IP address of the computer that will be used to access the Mars Viz website.

5. Why must we supply an IP address?

For security reasons, to assure access to Mars data and to assure the Mars Viz site is accessible only to the Mars Viz partners. IP addresses are a more secure method than passwords.

6. Why don't some IP addresses work?

If your IP address falls within any of the three ranges below, please talk to your network administrator to obtain your "real" IP address as these ranges are normally used for local networks only.

10.0.0.0 - 10.255.255.255

172.16.0.0 - 172.31.255.255

192.168.0.0 - 192.168.255.255

7. What if we don't have static IP addresses?

Supply one IP address and indicate that your organization uses rotating IP addresses; our technical folks will work with you on this.

8. Why are there "basic" and "expanded" options for participation?

We know that the resources of museums, science centers, and planetariums run the gamut from high to very low. Our hope is that even if you all you have is a telephone and a computer, you will benefit from the Mars Viz team's efforts to help you take your audiences along on our explorations.

9. What is the difference between the Basic and Expanded options?

The "basic" option assures you access to dedicated website, e-mail notifications of schedules and news, professional development opportunities (mostly via regular telecons) and the opportunity to advertise your organization's Mars events on NASA's public Mars page by filling out the form at <http://marsdata1.jpl.nasa.gov/events/>

The requirements for the "basic" option are to

- a. Supply IP address of machine that will be used to access the dedicated website.
- b. Comply with NASA/JPL processes on release of news and images.
- c. Report audience demographics.

The "expanded" option assures you all of the above, plus: automatic internet delivery of raw images within minutes of their receipt on Earth, at the same time the science teams receive them, throughout the missions (January-April, 2004).

The requirements for the "expanded" option are to

- d. Supply IP address of machine that will be used to access the dedicated website and receive the internet deliveries of images.
- e. Sign and return a License Agreement for use of free JPL-proprietary software, FEI Client (File Exchange Interface).
- f. Install FEI Client on machine at your organization (works on Linux, PC, and Mac operating systems). (Due to the volume of data expected, you may want to dedicate a machine for this purpose, or save things off your hard disk regularly.)

- g. Comply with NASA/JPL processes on release of news and images.
- h. Report audience demographics.

10. How do I get the FEI Client software?

When you sign up for “expanded service,” you will be sent a license agreement for the software. When you return the signed license agreement to us, you will be contacted by one of our technical staff with instructions on where to download the software, and how to install it.

11. What platforms does FEI Client support?

FEI Client supports Unix, PC, and Mac OS X.

12. What other technical requirements are there?

If you subscribe to receive the near-real-time images, you will probably want to dedicate a computer to this effort, as the data volume over the 90 days of the mission could be as high as 100 GB. Another way to handle the data volume is to regularly save the images off of your hard disk.

If you do NOT subscribe to receive the near-real-time images, there are no special computer requirements.

13. When will we begin receiving the near-real-time images?

Spirit is scheduled to touchdown in Gusev Crater at about 8:30 p.m. Pacific time, January 3, 2004. It is possible that some images may come back on that night, but it is more likely that a full set of images will be relayed through the orbiters for receipt on Earth Sunday January 4 in the afternoon. For the first couple of days, images will be placed on the Museum site in a Zip file and can be downloaded. They will not be pushed by FEI. After the first few days, the FEI Client will be turned on to push out near real-time images. You will receive an e-mail when that capability is in place. *Opportunity* is scheduled to touchdown on Meridiani Planum at about 9:00 p.m. Pacific time on January 24, 2003. Because FEI will be in place, images will be distributed through this system for *Opportunity*.

14. What file format will the near-real-time images be in?

The near-real-time images will be delivered as JPEG files.

15. How will we be able to display these images?

We suggest that you use a piece of shareware called “SVG Viewer,” (Scaleable Vector Graphics), which will be available for download from the Mars Viz website. The images will display well on screens ranging from a laptop to plasma screens to theatre screens up to 20’ (although 12’ is probably the best). The graphics and text will remain crisp.

16. Are there any restrictions on how we can use the near-real-time images?

No. You may show them to audiences, put them on websites, or print them. Each will include a credit line, which we ask that you retain.

17. Will other non-image data be released through this process?

Other data, such as spectra, will most likely be made public through press releases.

18. Will the near-real-time images be full color?

No. The near-real-time images will be raw images, that is, unprocessed, so they will be in black and white. Each day, processed images including color and stereo, will be made available either through the press releases or through the Mars Viz and Mars Exploration Rover websites.

19. How do we get color images?

As color images, mosaics, panoramas, anaglyphs, or animations are created, they will be made available through the Mars Viz or Mars Exploration rover websites. Some may be labeled as “embargoed” images.

20. Are there any restrictions on using images labeled as “embargoed”?

Yes. You may not use the images or information for public distribution until the date and time indicated on the Mars Viz website. You may ready them for use, however, as long as you do not display them before NASA releases them.

21. Is there any penalty for ignoring the embargo?

Yes. Your institution will lose access to the Mars Viz privileges, and such privileges for all other institutions may be jeopardized by the actions of a few. We appreciate your diligence on this issue and your help in building trust in our partnership.

22. Will we get range data so we can make 3-D images?

The science team will release 3-D images during the mission, but probably not during the first few weeks. Range data will be provided at some later point in the mission, once the science team has validated the data.

23. Will we get full-dome images?

Depending on how the mission goes, it is possible that some full-dome image products will be produced. We would very much like to provide these, so we will keep this on our radar screen.

24. Are there any other requirements for membership in Mars Visualization Alliance?

We request that you report to us how you use the images and other information.

There is an on-line report form on the Mars Viz website that will request information about your events, including audience demographics.

25. Is there any penalty if we don't report?

Your organization may not be considered for other opportunities. The reason that we need this data is so that in providing the infrastructure and data, we can report to

NASA Headquarters the effective use of funds for the public. Without your help in this reporting, our partnership will not be able to show the benefits.

26. Will other NASA missions use this process to distribute images?

Each mission has its own data structure and processes. We hope that other missions will take advantage of what we've learned in this alliance in order to make their images available in near-real-time also. Your feedback will be very helpful in this area. The Mars Program will continue to use and improve this for future Mars missions (every two years).

27. What happens to the Mars Museum Visualization Alliance when the Mars Exploration Rover missions end?

We plan on continuing and improving the alliance. We value you as a community of informal science educators who are dedicated to bringing current science and technology to museum audiences. We look forward to continued feedback from members on focus areas that interest you most, and will seek to expand in those areas.

The advantage of the Mars Exploration Program is that missions launch every 26 months. The next mission is the Mars Reconnaissance Orbiter, to be launched in 2005. It will be able to take images of Mars from orbit that show features as small as beach balls. In essence, through its cameras and other instruments, this orbiter will make many "virtual landings" to sites of scientific interest that may be potential landing sites for future landers and rovers. This mission will also have strong education programs that enable the public and students to suggest where they would like images to be taken.

In addition to the provision of visual materials, we also plan on continuing professional development opportunities for museum staff through regular interactions with Mars scientists and engineers. We would like to continue to advertise Mars events and exhibits on our site so that people in your home areas have quick and easy access to event information.

We're always interested in hearing your ideas too.